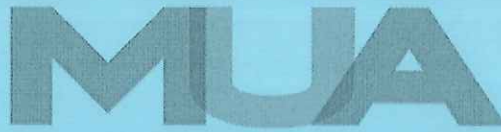


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**POST GRADUATE UNIVERSITY EXAMINATIONS**

**SCHOOL OF MANAGEMENT AND LEADERSHIP**

**MASTER OF ARTS IN DEVELOPMENT STUDIES**

**MDE 520: ENVIRONMENTAL ECONOMICS**

**DATE: 3<sup>RD</sup> AUGUST 2018**

**DURATION: 3 HOURS**

**MAXIMUM MARKS: 60**

**INSTRUCTIONS:**

1. Write your registration number on the answer booklet.
2. **DO NOT** write on this question paper.
3. This paper contains **FOUR (4)** questions.
4. Question **ONE** is **compulsory**.
5. Answer any other **TWO** questions.
6. Question **ONE** carries **30 MARKS** and the rest carry **15 MARKS** each.
7. Write all your answers in the Examination answer booklet provided

**QUESTION ONE**

**Read the Case Study below carefully and answer the questions that follow:**

Victoria, the capital of British Columbia, is currently working through a wicked problem involving their sewage system which has been dumping raw sewage into the waters off the coast of Victoria for over 100 years. There are three outfall pipes discharging preliminary treated sewage into the ocean (Berman, 2015), which means it is simply screened of large solids and not treated in any way (Pescod, 1992).

This lack of treatment has led to much discontent within Victoria and in other regional areas, such as Washington State, USA. Many stakeholders believe that a new sewage treatment plant must be built to treat Victoria's sewage waste, and others add that this treatment facility should perform tertiary treatment rather than only secondary treatment of the sewage discharge (Berman, 2015; Pescod, 1992). Among proponents for the plant are local citizens, scientists, environmentalists, as well as governments at federal and provincial levels. Many people disagree on the level of impact that this untreated sewage discharge has on local waters. Some say the environment is largely unaffected (e.g. Chapman, 2009), while others point to the excessive sedimentation in the waters around the discharge outflow pipes (e.g. Skwarok, 2013). The effect that this nutrient rich discharge may have on the environment is under scientific investigation.

**Required:**

- a) Based on the case above; Explain the classification sources of water pollution  
[10 marks]
- b) Discuss the effect of urbanization on the environment  
[10 marks]
- c) Discuss the components of EMS  
[10 marks]

**QUESTION TWO**

- a. Discuss poverty as a driver to environmental degradation in the World today

[10 marks]

- b. Explain why it is important to decentralize natural resource management

[5 marks]

### QUESTION THREE

- a. Explain the benefits of environmental assessment

[8 marks]

- b. On which factors should EIA identify, describe and assess the direct and indirect effects. Explain.

[7 marks]

### QUESTION FOUR

- a. Explain the solutions for market failures

[8 marks]

- b. Briefly explain the effect of population growth on environment

[7 marks]



